DP Preliminary Report, Spring 2016

The preliminary report in 6.033 has several purposes: to provide a framework within which you can articulate your preliminary design and justifications for design choices; to get feedback from technical instructors which will guide the remainder of the design and/or modifications to the design; and to gain mastery of many of the skills needed to write a systems design paper. Like the final design report, the preliminary report explains how your design works to solve the assigned problem. It further demonstrates that the design meets all the requirements, and justifies design decisions.

You should be able to characterize your proposed system at a high level using summary, and show how it will meet requirements. Doing so may require you to explain some of the implementation details. Your description should be written for a broad range of systems experts from different fields, and should build on our framework of key concepts such as modularity, simplicity, scalability, etc., using specific technical language as appropriate.

The DP Preliminary Report should be approximately 2000 words.

☐ **Title** names/describes your project.
  o I.e. "Wireless Network Optimization" not "6.033 DP"
☐ **Approach** presents the problem and your solution.
  o Explain the problem to be solved by your design (real world and technical)
  o Summarize your proposed solution, including an introduction to your main design choices (design approach) and the modules of your system in relationship with one another
  o Specify how your design solves the problem and meets requirements
☐ **System design** gives a fuller presentation of your design
  o Presents the high-level design of the system, including modular divisions
  o Responds to each requirement in detail; or may identify specific aspects to be addressed in the final report
  o Identifies major design decisions, tradeoffs, and choices made
  o Confirms that the design functions appropriately in specified use cases
  o Identifies and addresses relevant core concepts (scale, performance, etc.)
  o May include figures (titled, labeled, captioned, and referenced in the text) to illustrate complex or challenging concepts
  o Uses hierarchy (subsections, logical groupings of material) in the arrangement of the paper and briefly introduces each subsection
☐ **Conclusion** briefly summarizes how your design will meet the requirements, and notes problems which remain to be resolved.
  o May be a separate section or may be the final paragraph
☐ **Overall** the language of your report should be professional but not legal or bureaucratic.
  o We expect correct grammar and syntax, careful proofreading, and visually appealing layout

Jessie Stickgold-Sarah, Feb 19, 2016

Cover memo: Each student should provide a cover memo, approximately 250 words, to accompany the Preliminary Report. Memos generally use a block style (no indents) and are single-spaced, with a full space between paragraphs. The top of the memo should have four items, arranged as follows:

DATE:
TO:
FROM:
RE: (The subject of your memo—e,g., "DP Collaboration Agreement")

The prominent display of these elements in the heading clearly **identifies an audience**, **attributes an author**, and **contextualizes the forthcoming document content** by providing both date and purpose (to communicate information on a particular subject). The direct and easy-to-navigate style of the memo makes it an ideal document for communicating specific information in a professional setting.

This letter should briefly summarize the contribution of each team member and reflect on the writer's own contribution. Please answer these questions:

- What processes and agreements did your team develop to guide your collaboration?
- Which model(s) of collaboration did your team use to develop your design and write this proposal (review the handout if needed)?
- Were these decisions, modes and processes successful/appropriate for your team? Were they helpful in addressing concerns or disputes, or did they help avoid disagreement?
- Will you modify these agreements or change your process for the final report?